

Testimony of
Dr. Sam Curl
Dean and Director
Division of Agricultural Sciences & Natural Resources
Oklahoma State University

Review of the Research, Extension and Education Title of the Farm Bill
House Agriculture Committee
1300 Longworth House Office Building.
June 27, 2001

Mr. Chairman, I would like to extend my thanks to you and the Committee for the invitation to testify here today. I am Sam Curl, Dean and Director of the Division of Agricultural Sciences and Natural Resources at Oklahoma State University. I am here representing the National Association of State Universities and Land Grant Colleges (NASULGC). Founded in 1887, NASULGC is the nation's oldest higher education association. A voluntary association of public universities, land-grant institutions and many of the nation's public university systems, NASULGC campuses are located in all 50 states, the U.S. territories and the District of Columbia. As of October 2000, the association's membership stood at 212 institutions. This includes 75 land-grant universities (of which 17 are the historically black public institutions created by the Second Morrill Act of 1890) and 28 public higher education systems. In addition, tribal colleges became land-grant institutions in 1994 and 30 are represented in NASULGC through the membership of the American Indian Higher Education Consortium (AIHEC). My colleague, Dr. Phills, will be speaking on behalf of the 1890 institutions and I understand that the 1994 institutions (Tribal Colleges) and the U.S. territories will be submitting testimony for the record. The 1890s and the 1994s are represented on our Board on Agriculture and have participated in the development of the positions that I will speak to today.

I want to thank the Chair and this Committee for the leadership and the commitment you've shown to research, extension and education that supports the U.S. food, agriculture and natural resource system. We particularly want express our appreciation to the Committee for the establishment and support of the Initiative for Future Agriculture and Food Systems (IFAFS) in the 1998 Agricultural Research, Extension and Education Reform Act. This new programs focuses the research and extension talent of the land-grant and state university system on critical national issues at the local level.

Funding Needs

While IFAFS has proved a needed and wise investment, there is so much more that needs to be done. As we've heard from the testimony here today and in other hearings in the House and Senate, there is widespread recognition of the need to reinvest in our agricultural science and education foundation. We have witnessed decades of level funding or declining funding in agricultural science and education. As my colleagues from National Coalition for Food and Agricultural Systems (N-CFAR) have testified today, while private sector research has stimulated valuable innovations in agriculture, research areas that lack adequate short-term incentives for the private sector remain under-funded. Indeed today the picture of public versus private investment in agricultural science and education looks quite different. As shown in the attached chart, the private sector has steadily increased its investment while the public investment has decreased proportionately. This relative increase in private sector investments has recently led to questions about the independence and objectivity of research and outreach at the universities. There are issues to consider regarding intellectual property rights and private-public sector collaboration. However, the single action that could best ensure sustained and robust autonomy by the universities would be to reinvigorate the federal investment in agricultural research, extension and education. We seek to regain a balance between public and private sector funding for agriculture research and education. In so doing, our Budget Committee and the Board on Agriculture have endorsed and support N-CFAR's recommendation for doubling agricultural science funding.

We support the recommendation of a doubling in funding for agricultural research, extension and education programs over the next five years.

We also appreciate the testimonies submitted by the leadership of major farm and commodity groups that call for this doubling effort. We look forward to working very closely with these groups to develop and support new programs that will aggressively address their highest priority needs and to do so in a timely and accountable manner.

We believe that the IFAFS competitive grants model addresses several critical issues regarding private-public partnerships in research and education. First, IFAFS is targeted to practical problem-oriented research questions, that address real world production, processing and natural resource management issues. IFAFS is designed to address those issues that fall in the “chasm” between basic discovery research and product development research. Second, IFAFS facilitates collaboration between research, extension and teaching within and among universities, so that education and outreach are core and coequal components in addressing critical issues. Third, IFAFS facilitates joint efforts between the private and public sector to work together, leveraging private sector resources to address national public issues. We understand that there have been questions raised about the mandatory nature of the funding provided through IFAFS. From the university perspective, the critical issue is whether or not critical work is addressed and funded. Whether the funding sources are mandatory or discretionary is an issue for the Congress to resolve. We draw attention, however, to the structure and organization of the Initiative and we support its expansion and further refinement in the next authorization of the Farm Bill.

We recommend the expansion and further refinement of the IFAFS in the reauthorization of the Farm Bill.

Addressing critical issues for the new century

We would like to take this opportunity to describe the ways in which research, education, and extension can add value to the policies and programs designed to revitalize rural and tribal communities, provide for a safe and abundant food supply, and promote environmental stewardship among America’s farming community. As you have heard from others, we firmly believe that a strong science and education foundation is a necessary and critical component to effectively deal with *all* of the policy issues included in the Farm Bill.

- Given current market forces and the coming changes in farm support programs, how do we re-tool research, extension and education programs to better meet the current needs of farmers and ranchers? How do we increase “value-added” opportunities to farmers and ranchers and their new business entities, thereby enhancing the economies of their communities?
- How can we respond more quickly to emerging public concerns about the safety of our food products and processes? How can we better under-gird our trade and marketing objectives with sound science, drawn from cutting edge research programs, and delivered through the most effective education outreach efforts?
- How do we link research, extension and education programs to address conservation and environmental issues being faced by producers and processors?
- How do we foster a new model of cooperation between the federal laboratories, the universities and the private sector as the genomes of plants and animals are sequenced and a new generation of functional genomics emerges? What programs need to be in place to assure the public that adequate safeguards are in place as new products emerge from this technology?
- How do we better link our science and education capacities to meet the nutrition and public assistance responsibilities of the Department?
- How do we better link our distributed research, extension and education system to meet the needs of our rural and tribal communities?

Programs that address these challenges are in other titles of the Farm Bill. We are very interested in assuring that there are clear linkages between the research, extension and education system addressed in the

Research, Extension and Education title of the Farm Bill and the other titles of the bill. Our goal is to work with you and our constituents and stakeholder organizations to insure that our programs are closely connected to the critical policy issues and needs being addressed in the rest of the legislation. In the following testimony, I review some ways that research, extension and education may be directed to the critical issues facing this Committee.

Supporting farmers

Farm Subsidies

In the course of the current Farm Bill Hearings, recommendations for changing the farm support programs are emerging. Most of these proposed changes imply some type of revenue assurance or insurance as the tool of choice. The idea is to pay the farmers in periods of low prices and yields, but not in times of high prices and/or yields. The 21st Century Commission described this new counter cyclical program as Supplemental Income Support (SIS). It is related to a similar proposal by Congressman Stenholm, the Supplemental Income Payments for Producers (SIPP). Analyses of these and related possibilities suggest that with somewhat more sophisticated approaches, based on simple principles of insurance, the cost of the government program for agriculture could be greatly reduced. It is certainly possible that the 2002 Farm Bill will include the ideas of revenue insurance and counter cyclical payments.

Possible issues for the land-grant colleges and state universities include:

- Research on risk management tools that exist in the market and on new tools that may become available in the 2002 Farm Bill. Educate farmers about their use. Also provide risk management assistance to livestock producers as well as crop farmers. This could counter a longstanding lack of attention to livestock producers, and is now more an issue with the increasing specialization of farmers.
- Targeting the needs of small farmers. We support enhancing and expanding the abilities of the state universities and land-grant colleges to provide programs to small and underserved producers and their communities.
- Research and education to improve the design and implementation mechanisms for revenue and other insurance tools, private and public.
- Developing extension outreach programs to help agriculture producers “transition” to part-time farming or other occupations. If there is a reduction in payment programs and a move towards assurance/insurance programs, some producers may benefit from transition assistance.
- Research and education to improve understanding of the role of the farm subsidies and the delivery mechanisms for the economic welfare of rural and tribal communities.
- Developing approaches to the increasingly segmented or differentiated markets for agricultural products, including pre- and post-farmgate value-added business opportunities. For example, develop systems of quality management and electronic marketing that can better serve customers in a segmented agricultural market. Premiums for these products and processes will be important to farm income as the blanket subsidy levels fall.
- Exploring ways to better use private land in support of the development of rural areas, recreation and amenity production as compared to crop/animal production, ensuring that the subsidy delivery structure does not disadvantage the producers that pursue these avenues.
- Stressing the importance of alternative uses of agricultural commodities such as sustainable energy production, and assuring that the necessary research and education and outreach programs are in place to develop the associated production, processing and distribution systems.
- Developing a program for the review of alternative value-added forest products derived from thinnings and small-diameter trees. This program would assist land owners to determine whether any alternative products can be produced from smaller diameter trees found on their property, and spur the development of cottage industries that promote their utilization.
- Helping the public and farmers / ranchers understand the incidence of subsidies and the incidence of the benefits, e.g., for FY2000, the estimate is that about \$13 billion of the total farm expenses will go to rental paid to off-farm owners. This is more than 5 percent of total farm expenses.

Check-off Programs

The so-called "check-off" programs for many of the major and minor commodities provide significant support to research, education and extension as well as other activities. The state universities and land-grant colleges play an important role in these programs. At the same time, producers are questioning the effectiveness of check-off supported promotion programs that are generic or commodity based. How can these programs be improved to more effectively address the needs of producers?

Opportunities and challenges for the state universities and land-grant colleges include:

- Independent research to determine if check-off programs are in the best interest of producers and add value beyond their cost.
- Assessing the value of generic advertising. Perhaps these funds would yield a higher return if they were redirected to activities other than direct promotion of generic commodities.
- Linking the promotion programs to branding and other similar activities that take advantage of increasingly segmented markets for agricultural products.

Perhaps check-off funding could be directed to support new marketing systems rather than to generic commodity-based promotion. If this change were made, the state universities and land-grant colleges could be effective cooperators with the commodity associations in carrying out the research and education to assure effective implementation of programs to take advantage of new technologies to support product differentiation and increased returns to farmers.

Credit

It is possible that credit issues will need to be addressed, due in part to the adjustments in the private banking/credit sector that are coming with the implementation of reforms authorized by the Gramm, Leach, Bliley Act of 1999.

Specific linkages to research, extension and education could include:

- Identification and analysis of the market failures that the government intervention is designed to correct.
- Expanded collaboration among commercial banks, the farm credit system, and the Extension system to provide financial management education and outreach programs.
- Expansion of the Beginning Farmers and Ranchers Program to help participants access the resources of state universities and land-grant colleges.
- Credit might be more fully opened to non-farm enterprises in rural communities as a developmental tool, complementing the programs under Title VII.

Building international trade and market opportunities

Questions have been asked about the effectiveness of some of the trade and market programs authorized in the Farm Bill. There have not been adequate linkages between these issues and the science and education provisions of the Farm Bill. Countless studies have shown that investments in science serve as a "discovery engine" that drives the development of new technologies, which in turn provides a foundation for value-added products and processes that provide profit and positive trade balances. New technologies, new processes and new practices are necessary to maintain and enhance our global competitiveness. New technologies need to be developed that focus on providing value-added opportunities for U.S. producers and processors, technologies that provide enhanced income through better identifying and meeting diversified customer demands. Finally, publicly funded research and development has provided the U.S. a competitive advantage through the years. It is economically essential that we retain this advantage.

Issues for state universities and land-grant colleges include:

- Future market growth for U.S. agricultural products remains in the global market. We support increasing the utilization of our international agricultural scientists and educators to help our producers respond more effectively to the global dimensions of agriculture.
- Our agricultural curricula and degree programs, as well as not-for-credit extension training programs need to be retooled to better prepare our students to compete in a global economy. Students, scientists and educators need enhanced opportunities to study and participate in agricultural programs abroad. The 1998 AREERA includes authorization of GASEPA (Globalizing Agricultural Science and Education Programs for America). We recommend the reauthorization of this program and its full implementation.
- Developing better strategies for export promotion, and demonstrate their success as measured according to agreed upon criteria.
- Utilizing the concessionary exports to accomplish broader global and recipient nation development objectives compared to market development.
- Improving understanding of the implications of market development strategies and concessionary exports for recipient countries, and the dumping practices they were in part designed to counter.
- Increasing participation in the use of local currency funds (Section 416 (b)) to support internationalization of the agriculture curriculum and youth programs.
- Enhancing linkages between the PL 480 and international agricultural science and education programs. As a model, there is an IPM CRSP grant that has made good use of PL 480 resources in Guatemala to support an applied research activity to enhance the development of nontraditional export crops in that nation. This benefits the U.S. through enhancement of our own domestic markets for these crops during the off-season when US sources are not available.
- Developing "food grant universities" to make long-term commitments to food deficit nations and use the local currency generated by monetization to support the development of land-grant like higher education institutions. U.S. state universities and land-grant colleges would be paired with the developing country institutions.
- Directly participating in the Farmer-to-Farmer Program, perhaps expanding it to include undergraduate and graduate students in College of Agriculture programs.
- Partnering with FAS to develop new and more cooperative foreign technical assistance programs. The state universities and land-grant colleges have a great capacity to partner in this new program.

Existing agricultural trade and development mechanisms can achieve expanded objectives. Most of the export increases have been related to price and increased incomes in developing nations. Education is broadly accepted as a key to economic development, a major factor in growing the total export market for agricultural commodities. The food grant university, undergraduate and graduate foreign study/exchange, and FAS cooperative proposals have the U.S. exporting what it does well.

Conserving natural resources

Continuing to improve the stewardship of natural resources and the environment is one of the most critical and pressing issues facing farmers and ranchers, and our nation. Agriculture is seen as a major source of the nonpoint contamination of surface and ground water in the United States. Agriculture is also an issue for air quality and for the larger concerns about global warming. Environmental groups are impatient with agriculture; there is frustration with the perceived failure to achieve measurable improvements. This impatience is reflected in the development of regulatory solutions, Total Maximum Daily Loads (TMDL's), nutrient standards for surface water, and AFO/CAFOs, for animal waste management.

Cooperation between USDA and the USEPA has resulted in a new approach that emphasizes results-based outcomes and de-emphasizes regulating the practices that lead to these measurable outcomes. If this approach continues to emerge, there will be an increase in the need for federal and state staff for technical assistance and for monitoring and compliance. The U.S. research, extension and education system will have a unique and essential role to play in the emergence of a new, results based approach to environmental management. These challenges transcend national boundaries; our international agricultural research and education programs will allow us to draw on discoveries and techniques emerging in other countries.

Research is needed for developing new production management tools and assessment systems. Extension should be fully utilized to work in collaboration with USDA/NRCS and the National Association of Conservation Districts (NACD) to develop the education and outreach programs that will be necessary for success.

Conservation and environmental issues facing agriculture are complex. Dramatic investments in the science base underlying the programs that are developed to protect the environment can add tremendous value to these programs. There is a great need for increased education and outreach efforts. Greater cooperation between CSREES, ARS, NRCS and the state universities and land-grant colleges is critical to these efforts.

Possible issues for state universities and land-grant colleges include:

- Supporting Extension education programming associated with specialized conservation programs such as EQIP, WHIP, FIP, WRP, and others.
- Researching new conservation management practices for potential impacts on water and air quality and educating farmers about their use. For example, conduct additional research into, and outreach to farmers about, the effect of no-till and other conservation practices on water quality for related watersheds.
- Developing extension outreach and research assistance programs to help farmers meet the increasing environmental regulations, such as AFO/CAFO. There is a need to develop alternatives to practice-based compliance.
- Conducting systematic assessment and beta analysis of how different conservation programs are working to achieve environmental results.
- Researching and monitoring environmental benefits of different priorities for conservation programs such as EQIP.
- Providing added on-farm and watershed demonstrations of environmental management practices.
- Researching grazing lands, validation of wind erosion models and crop loss models, and land use management (e.g., Farm Land Protection Program).
- Conducting research necessary to integrate commodity and conservation programs.
- Establishing local clearinghouses and educational programs for environmental regulations with which conservation programs must comply.
- Coordinating education and technical assistance programs, developed collaboratively between extension and NRCS and National Association of Conservation Districts (NACD).
- Establishing a biodiversity program to include germplasm collection and mechanisms for public ownership.
- Expanding youth participation in conservation programs via extension services.
- Supporting colleges of agriculture as they develop natural resources and environmental management curricula.
- Promoting research on terpenes and other naturally occurring compounds released from trees and forest areas into water systems. There is a need to determine the impacts that declining forest health has on naturally occurring compounds released by trees and forest areas that can have negative impacts on water quality and microflora and fauna populations in these water systems.
- Supporting a national education program through extension to involve students in hands-on learning experiences with sustainable forestry programs. Such a program could include a web site for students to exchange their experiences and cultural values associated with their forests with other students across the U.S. A pilot project of this design has been developed between extension services in Kentucky and Alaska.

Better nutrition and health

The Food Stamp Program changed significantly with the welfare reform initiatives of the 1990s. Other domestic programs as well, have felt the effects of the devolution implicit in welfare reform. These reforms have mostly occurred in the context of the growing economy, a condition that may shift in the months leading to the 2002 Farm Bill legislation. As well, the "bankable" part of the five-year grace period

for most current welfare program participants is running out. In short, there is a possibility for adjustment in the nutrition and food programs as the economic conditions change and as participants transition off the programs--all of which seem to imply increased federal expenditures.

These food and nutrition programs are now widely used by rural and tribal community residents, and especially by their aging populations. Both make this legislation important to the state universities and land-grant colleges that are in rural states and/or depend on rural constituencies. The foreign food assistance programs (PL 480 and GSM) continue at high budget levels (almost \$2 billion). The state universities and land-grants have, to a large extent, not participated in the use of the in-country funds generated by these programs. With the interests of students and their employers in international experience and related education, there is opportunity for gain and more effective use of the resources from these programs.

There are significant research and education activities related to USDA's nutrition programs. The Food Stamp Nutrition Education Program (FSNEP), which uses Extension staff to educate the Food Stamp Program participants, is an example of how CSREES and the state universities and land-grant colleges can cooperate to effectively do the business of USDA.

Issues for the state universities and land-grant colleges include:

- Enhancing partnerships between USDA and the universities for nutrition education messages, assessment and research. Enhance support for Extension nutrition assessment and outreach programs and collaboration between EFNEP and WIC education efforts. With block grants, programs are becoming more adapted to state specific needs. Assessment and education programs are needed that can facilitate sharing the lessons learned in one state with others.
- Adding emphasis on preventive health care. The state universities and land-grant colleges are poised to develop expanded outreach and education activities in this area via the School Lunch Program and youth programs by using the Extension system.
- Collaborating in Community Food Projects. These food projects provide additional opportunity for nutrition education and a major opportunity for supporting the development of local markets and farm diversification. Based on the tremendous success of Community Food Projects, we support an increase of authorized funding from \$3.5 million to \$15 million annually.
- Providing better access to locally grown products for school feeding programs and WIC Farmers Markets.
- Researching and developing education programs to determine and influence participation rates, self-selection among the eligible population and how states will support this increasing local responsibility for managing and financing food and related assistance programs.

There are clear opportunities to increase program efficacy and efficiencies by greater collaboration between the universities and colleges, the Food Stamp Program, the Community Food Projects, the Commodity Supplemental Food Program (CSFP) and the Food Distribution Program on Indian Reservations (Commodity Distribution Program).

Revitalizing our communities

Rural areas continue to fall behind compared to urban and non-metro areas (CSRA 2000). There is more and more attention given to the economic and other interests of the rural areas in the Congress. The emergence of the Rural Caucus is an example. The last session of Congress saw the introduction of numerous bills targeting the improvement of the economic status of rural America.

Possible ways in which state universities and land-grant colleges can support rural communities include:

- Designing and implementing training programs in the utilization of tax credits for rural residents. Tax credits may be an underutilized tool, and there may be unique opportunities with the tax reduction legislation recently signed into law.

- Expanding distance education to help remote communities, and reservation communities, develop strategies and programs to meet their telecommunications needs. Extension can expand its efforts to assist small business access to “e-commerce” opportunities and global markets. Distance and connectedness are reoccurring issues in the rural economy legislation introduced during the last Congressional Session.
- As part of “block granting,” many government management responsibilities have moved from the federal and state level to county and local governments. Most local officials have not had the background or training to manage these new responsibilities. Extension has been actively involved in providing leadership development programs and specific training for these officials. These programs need to be strengthened and enhanced and coupled with a strong research base.
- The research base (the new economic geography) for rural development or community vitality needs serious attention. Surprisingly, little is known about the success of various strategies for growth and development in rural economies and their communities. We support efforts to research, educate, and evaluate rural and tribal community development. This could come in a process to reform and reenergize the Fund for Rural America (FRA), or expand the provisions of IFADS to address these issues..
- Conducting research into, and educating rural and tribal communities about improved economic opportunities through natural and agricultural based development such as bioenergy and biomaterials, tourism and amenities promotion and marketing. Conduct research into, and educate the public about new business structures of growers who focus on value-added agriculture.
- Initiating place-based development for rural and tribal communities in tandem with economic development activities. For example, fund rural economic development programs to accompany the EPA’s Regional Environmental Initiatives.
- Developing new models for the universities and federal laboratories to work together with the private sector, to insure that the results of discovery research are sufficiently captured and developed such that research results can reach commercial development. Many states have developed new and exciting models of collaboration that provide for more effective research and development investments and collaboration.
- Expanding youth participation in technology training of rural and tribal community residents.

Research, Extension and Education

In the 1998 AREERA, new provisions were established regarding joint research and extension projects and multistate efforts. We support the intent of Congress to facilitate greater cooperation between research and extension. We support the intent of Congress to facilitate greater cooperation among the states, so that we can better coordinate our efforts and target scarce resources. We support the intent of Congress to enhance and enrich meaningful stakeholder involvement in setting priorities and in program development for research, extension and education. We commend the Congress for establishing the National Agricultural Research, Extension and Education Advisory Board (NAREEAB) and we recommend its reauthorization.

Technical questions have emerged in the implementation of AREERA on how some of our joint efforts can or should be reported. We believe that most or all of these issues can be sorted out in discussions among the universities, the Department and your Committee staff, which we hope to do in the near future. The bottom-line is that we want to increase the efficiency of our reporting and accounting procedures and to make best use of current technologies.

Opportunities and challenges for state universities and land-grant colleges include:

- Establishing program authority for research, extension and education to address critical issues, such as biotechnology and bio-and food safety, that are not adequately addressed in other titles of the Farm Bill.
 - Research detection, causes, mechanisms of transmission, interventions and controls, risk analysis, and communication of plant and animal diseases and food borne illnesses that result from microorganisms, toxins, pesticides, and allergens.

- Coordinate and communicate with other USDA departments, state and local agriculture and public health agencies, and federal agencies such as the Food and Drug Administration, USEPA, Department of the Interior, Center for Disease Control to share science databases, research publications, and risk assessments.
- Develop and implement training and education programs for the prevention of, and response to, outbreaks of animal and plant diseases and food borne illnesses. Develop these programs specific to the needs of the variety of publics on the farm to fork continuum such as consumers, producers, processors, retailers, and the food service industry.
- Develop and maintain a national food safety database to track occurrences of outbreaks.
- Evaluate the effectiveness of the various programs designed to assure food safety and protect farmers and agribusiness from disease and other threats that increase as a result of increased international commercial and other activity.
- Investigate fee-based food safety and farmer protection programs.
- Develop education programs to accompany regulatory provisions such as Swine Health Inspection, Inter-state Quarantine, and inspection panels. Develop and implement electronic communications technologies for regulatory programs.
- Evaluate quality control systems, such as ISO 9000, as alternatives and/or complements to inspection and regulatory programs.
- Establishing program authority for the development of agricultural curriculum, including classroom lessons, experiential learning, and distance learning for K-12 and higher education students.
- Establishing programmatic and funding mechanisms that will better enable the universities and land-grant colleges to link to and coordinate with the other USDA agencies addressed in other titles of the Farm Bill.
- Resolving implementation questions between the universities and USDA on reporting and accounting requirements established in the 1998 AREERA.
- Expanding extension services' non-classroom youth activities to take advantage of new experiential learning approaches.
- Agricultural classroom curricula and degree programs, as well as not-for-credit extension training programs need to be retooled to better prepare our students to compete in a global economy. Students, scientists, educators and practitioners need enhanced opportunities to study and participate in agricultural programs abroad. The 1998 AREERA includes authorization of GASEPA (Globalizing Agricultural Science and Education Programs for America). This program should be re-authorized and more fully implemented.

State and Private Forestry

The state universities and land-grant colleges could address the following state and private forestry research, education, and extension needs:

- Establishing a stronger role for Extension in providing technical assistance in environmental stewardship to forest landowners through an expanded RREA. One component of this technical assistance could be the design, development, and evaluation of a web-based learning initiative, whereby forest owners would gain access to educational materials and programs to better inform their forest management choices. Only 10 percent of all forest landowners have the benefit of professional forestry advice prior to harvest. Thus, the vast majority of timber sales occur without adequate means to minimize impact on water quality, important wildlife habitat, recreational opportunities and other environmental issues.
- Establishing four regional Forest Research Extension Centers to expand the capacity to research forest ecosystems and address forest issues. This would also be accomplished through an expanded RREA.
- Establishing a National Forests Advisory Council to develop strategies and programs to implement the recommendations of the National Research Council Report, *Forested Landscapes in Perspective: Prospects and Opportunities for Sustainable Management of America's*

Nonfederal Forests, and the National Coalition for Sustaining America's Nonfederal Forest report, *A National investment in Sustainable Forestry: Addressing the Stewardship of Nonfederal Forests through Research, Education, and Extension Outreach*.

- Authorizing the eligibility of 1890 land-grant institutions for the Cooperative Forestry Research Program.

Funding Priorities

The Research, Extension and Education Title of the Farm Bill provides a balanced portfolio of funding mechanisms, including formula funds and competitive grants. We endorse and recommend the continued authorization of this portfolio of funding mechanisms, which makes it possible to address both long-term program needs and short-term, quick response projects. We support and endorse the continuation and enhancement of the IFAFS program and the FRA, funded through the mandatory accounts. We support and endorse the continuation of the programs authorized in this bill and funded through the discretionary accounts. We look forward to working with this Committee and the Congress to determine the best balance between these funding mechanisms, with the goal of sustaining critical federal investments in priority research, extension and education programs.

As I have stated previously, we are very interested in tightly linking the research, extension and education system to the critical policy issues addressed throughout the Farm Bill. High priority issues include:

- Enhancing production, processing and trade;
- Improving targeted market opportunities, at home and abroad;
- Developing and applying the next generation of value-adding tools and processes to generate enhanced income opportunities;
- Creating new opportunities for biomass, biomaterials and bioenergy products;
- Applying the best scientific assessment procedures to assure the consuming public and customers that our food products are safe and wholesome;
- Creating new connections and relationships through advanced science and effective education between food, nutrition and the health and well being of all people;
- Generating the next generation of environmental management tools and techniques to protect our country's natural resources while producing food and fiber that is safe and affordable; and
- Harnessing our science and education system to meet the diverse needs of our rural economies and communities, providing leadership in developing the next generation of leadership skills and telecommunications capabilities.

Improved Linkages

In this testimony, I have stressed the need for increased federal investment in the agricultural and natural resources research, extension and education system. This increased funding is necessary to support farmers and ranchers, processors, our rural and tribal communities, and the consuming public as they meet the challenges of the 21st century. We recommend that increased investments in research, extension, and education programs can most effectively address critical challenges by more tightly linking with the science and education needs of the action agencies in USDA, so that the federal agency and the state and land-grant universities can, as partners, better serve the U.S. food, agriculture, natural resource and rural community sectors in the challenging years ahead. We look forward to working with the Committee and your staff to work through the details of these recommendations.